



CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Post Office as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on

Date:

Name:

Signature:

2/4/03

RICHA DAGOSTINO
Jesse Dagostino

Clifford Chance US LLP

Docket No. 5677-111

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Leo J. Romanczyk, Jr. et al.

Filed: April 11, 2001

Group Art Unit: 1654

Serial No: 09/833,134

Examiner: C. Tate

For: EXTRACTION OF STEROLS FROM COCOA HULLS

RECEIVED

Commissioner for Patents
Washington, D.C. 20231

FEB 13 2003

TECH CENTER 1600/2900

AMENDMENT

Sir:

This is submitted in response to the Office Action mailed November 6, 2002. A response is due February 6, 2003.

Claims 2 to 11 and 15 to 23 are presented for examination on the merits.

Claims 1, 12-14 and 24-28 are restricted out.

Please amend Claims 2-4, 7-11, 15, 19, and 21 and add new Claim 29 as follows:

- Sub 2
2. A cocoa oil extracted from cocoa hulls which comprises phytosterols and tococls.
 3. The oil of Claim 2, wherein the phytosterols are campesterol, β -sitosterol, stigmasterol, cycloartenol, and 24-methylene cycloartanol.
 4. The oil of Claim 2, wherein the phytosterols are a mixture of free and bound sterols.

7. The oil of Claim 2, wherein the cocoa hulls are from dried, unfermented or fermented, non roasted cocoa beans.

8. The oil of Claim 2, wherein the cocoa hulls are from micronized, non-roasted cocoa beans.

9. The oil of Claim 2, wherein the cocoa hulls are from roasted cocoa beans.

10. The oil of Claim 2, wherein the cocoa hulls are from Theobroma cacao.

11. A cocoa oil which is prepared by a process comprising the steps of:

- a) grinding cocoa hulls;
- b) extracting the ground cocoa hulls with a solvent that dissolves phytosterols and tocols;
- c) removing the solvent; and
- d) recovering the cocoa oil.

15. A process for extracting a cocoa oil comprising phytosterols and tocols from cocoa hulls, which comprises the steps of:

- a) grinding the cocoa hulls;
- b) extracting the ground cocoa hulls with a solvent that dissolves the phytosterols and the tocols;
- c) removing the solvent; and
- d) recovering the cocoa oil.

19. The process of Claim 15, further comprising the step of frationating the cocoa oil by preparative high pressure liquid chromatography or column chromatography.

21. The process of Claim 15, wherein the cocoa hulls are from micronized, unroasted cocoa beans.

29. (new) The oil of Claim 2, wherein the tocols are tocopherols and tocotrienols.